

**Inclusion of Yellow Pond Turtle *Mauremys mutica* in Appendix II. Proponent: China and United States of America.**

**Summary:** The Yellow Pond Turtle *Mauremys mutica* is a medium-sized omnivorous turtle that inhabits shallow lowland wetlands, streams and other water-bodies in forest. Clutch size ranges from three to seven eggs. The species is reportedly widespread in China and Viet Nam; small populations occur in Japan and Taiwan POC. It also occurs in Hong Kong SAR, though the population here is thought to be entirely released. Considered threatened and in decline throughout the majority of its range, only China has much suitable habitat remaining for this species. The main identified threats to *M. mutica* are collection for the food trade, habitat loss and modification. Additionally, in Hong Kong SAR, the plastron of *M. mutica* is commonly used in preparing turtle jelly. Market surveys in Hong Kong SAR during 1998 and 1999 found *M. mutica* to be the most common turtle in trade; it is thought that a proportion of these may have been bred in captivity. Captive operations are likely to be insufficient to meet the demand for this species from the food trade. *M. mutica* is afforded some protection from collection and export in Viet Nam and Taiwan POC, but legislation is not implemented effectively and specimens have been observed for sale in both countries. The Japanese population is fully protected by law and appears moderately well protected by implementation. The proponents seek inclusion of the Yellow Pond Turtle in Appendix II in accordance with Article II. Resolution Conf. 9.24, Annex 2a criteria A and Bi) on the grounds that if international trade is not strictly regulated the species will meet the criteria for inclusion in Appendix I in the near future and that harvesting of specimens from the wild will exceed, over and extended period, the level that can be continued in perpetuity.

**Analysis** The species appears to meet the criteria for inclusion in Appendix II (Bi). Although concrete data are lacking, the species appears to be in decline through much of its range and demand is high for the international food and medicine trade, it being one of the most commonly observed species in food markets. It appears unlikely that harvest for international trade is sustainable. Inclusion in the Appendices may also help implementation for some *Cuora* spp. (Appendix II), which it reportedly resembles.

Supporting Statement (SS)	Additional information
<b><u>Taxonomy</u></b>	
Synonyms: <i>Emys muticus</i> , <i>Clemmys mutica</i> .	Mauremys nigricans, Clemmys nigricans, Annamemys grochovskiae ( <i>Jenkins, 1995</i> ), Dameronia mutica, Clemmys schmackeri, Geoclemmys mutica ( <i>Chen Tien Hsi, 2002</i> ).
<b><u>Range</u></b>	
China, Japan, Viet Nam, Hong Kong SAR (believed to be released animals).	<p><i>The Scientific Authority of Viet Nam (2002) states that M. mutica does not occur in Viet Nam. However, Hendrie (2000) lists M. mutica as occurring there as a species distinct from Annamemys (Mauremys) annamensis. M. mutica occurrence in Viet Nam is documented by Bourret, 1941, Dao, 1960, as A. grochovskiae; Petzold, 1963; Iverson and McCord, 1994, and Yasukawa et al., 1996.</i></p> <p><i>In Taiwan POC the species occurs in scattered and small populations.</i></p>
<b><u>IUCN Global Category</u></b>	
EN A1cd +2cd	

**Biological and trade criteria for inclusion in Appendix II**

**A) Trade regulation needed to prevent future inclusion in Appendix I**

Based on the IUCN Red List decline rate used for categorising this species as EN, this species may meet criteria Ci in the near future.

Supporting Statement (SS)	Additional information
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**B) Harvesting for international trade has, or may have, detrimental impact on population**  
**(i) exceeds sustainable yield; (ii) reduces population to potentially threatened level**

**China:** although widespread in central and southern regions, the species is considered 'endangered' in China. **Japan:** a small population; it is considered 'vulnerable' in the Ryukus. **Viet Nam:** northern and central Viet Nam in the lowland regions, considered 'endangered'. **Hong Kong SAR:** the species is known from several locations though the few specimens encountered are believed to be released animals.

The Yellow Pond Turtle is one of eight species that was consistently present in the food trade in China. No specific studies have been undertaken for this species in any country of occurrence, but it is likely to be in decline throughout its range, based on declines in availability in food markets, particularly in China and Viet Nam.

*M. mutica* is used commonly for food in mainland China and Hong Kong SAR. In Hong Kong SAR it is also an important ingredient in traditional medicine. There is also a small demand for the pet trade. It is thought that the species may have been hunted for local consumption in the past in Viet Nam. More recently, specimens taken in Viet Nam are most likely to be sold to traders, although the species does not appear in trade records of exports from Viet Nam for the period 1994-1999 (several non CITES turtles species are included in export data for that period).

The SS notes that there is a trend for captive-bred specimens of this species to be exported to China. However whilst the facilities may meet the demand for the pet trade, they will not meet the demand for the food trade.

*Based on limited data, the nesting season in Taiwan POC is from May to July and clutch size ranges from four to seven eggs, it is not known whether more than one clutch is produced per year (Chen et al. 2000). Information for captive individuals suggests a lower reproductive rate of one clutch per year, three to five eggs per clutch for females older than five years and two eggs for females aged for three to four years (Ma Jianfan, 2002). Official trade data from China for the year 2000 record the import of 8 340 live specimens of M. mutica (CITES Management Authority of China, 2002). M. mutica may be sold within China as Cuora aurocapitata, Cuora pani and/or C. trifasciata as they are difficult to distinguish (van Dijk, 2002).*

*In Taiwan POC the species is encountered 'occasionally' in the traditional Chinese medicine market and markets for religious purposes (Chen et al. 2000).*

*During surveys of Hong Kong SAR's pet and food markets, conducted between May 1998 and May 1999, M. mutica, with a total count of 2 890 individuals, was by far the most common turtle species recorded in local trade. Between 85-382 live specimens were observed each month; prices ranged from HKD 80-120 (USD 10-15) per adult. The standard size of juvenile specimens of M. mutica observed in markets indicates that they may have been bred in captivity; and communications with reptile breeders in the USA supported this (Chan 1999).*

*Official US trade data show a total of 615 live specimens of Mauremys species (excluding M. caspica) were imported into the USA from 21 January 1998 to 28 August 2001. Of these, 57 were reported as having originated from captive breeding operations in Japan (54) and China (three). The USA also reported exporting specimens that had been bred in captivity there.*

**Inclusion in Appendix II to improve control of other listed species**

**Specimens resemble other species and are difficult to distinguish, or most of taxon is already listed**

*Reportedly difficult to distinguish from some Cuora spp. (Appendix II) (van Dijk, 2002).*

**Other information**

**Threats**

In mainland China and Viet Nam over collection for the food trade and habitat loss are reported to be the main threats.

*Classified as rare in Japan. Field surveys of habitats and populations have not been carried out in Japan, but it seems that many populations have drastically declined associated with habitat loss and fragmentation. It is not used for food in Japan (Yasukawa, 2000); however, local pet dealers on Yonagunijima Island report that over 5 000 individuals have been collected and exported to the mainland as pets each year since 1981 (this estimate may be exaggerated) (Yasukawa et al., in press).*

**Conservation, management and legislation**

A permit is required for trade in wildlife in Viet Nam and export of all native turtle species is prohibited.

*This species has been designated as a 'natural monument' by City Government since 1973 in Kyoto prefecture, and its handling is strictly regulated by the*

Supporting Statement (SS)	Additional information
<p>China has recently taken several legal/regulatory measures to control imports and exports of freshwater turtles.</p> <p>There are no specific monitoring programmes or conservation actions for this species. A Turtle Conservation and Ecology project began in Viet Nam in 1998.</p> <p>Limited regions of turtle habitat are included in designated protected areas .</p>	<p><i>local ordinance (Yasukawa, 2000).</i></p> <p><i>For information on recent import restrictions to China, see Conservation, Management and Legislation section of the analysis of CoP 12 Prop. 20, to include Platysternon megalacephalum in Appendix II.</i></p> <p><i>In Taiwan POC, commercial trade of wild caught turtle species is prohibited. However, trade remains effectively unregulated.</i></p>

#### Similar species

*Reportedly similar to some Cuora species (see above). Mauremys mutica is also not particularly easy to distinguish from other Mauremys species (TRAFFIC Southeast Asia, 2002). It is similar to Annamemys annamensis (the subject of proposal 12.21) and can be confused with Chinemys nigricans (Chen Tien Hsi, 2002; Fong, 2002; TRAFFIC Southeast Asia, 2002).*

#### Captive Breeding

The SS notes that there is a trend for captive bred specimens of this species to be exported to China. However whilst the facilities may meet the demand for the pet trade, they will not meet the demand for the food trade

*The present population of M. mutica at Tunchang turtle farm, Hainan Province, China is approximately 3 000 adults, 2 000 sub-adults and 2 000-3 000 hatchlings. M. mutica is apparently relatively easy to breed and maintain (Shi and Parham, 2000). Some small farms in Jiangsu Province, near Shanghai, breed this species for the pet trade (TRAFFIC East Asia, 2002). The species is also bred in captivity in the USA and Europe in modest numbers by hobbyists, though not primarily for commercial purposes (TRAFFIC East Asia, 2002; Hofstra, 1995).*

#### Other comments

The consensus recommendation of the Technical Workshop on Trade in Freshwater Turtles and Tortoises in Asia, Kunming, China, 25-28 March 2002 supported this proposal and the species was regarded as one of the 11 highest priorities for inclusion in CITES Appendix II.

*One of the commercial names for this species is "Green hair turtle" because species of water algae resembling hair grow on the shell of some specimens (Ma Jianfan, 2002).*

**Reviewers:** Chen Tien His, TRAFFIC East Asia, TRAFFIC East Asia - China Wildlife Trade Programme, TRAFFIC Southeast Asia

#### **References:**

- Bourret, R., 1941. Les Tortues de l'Indochine. *Bulletin de l'Institut Océanographique de l'Indochine*, Note 38: 1-235.
- Chan, B.P.L., 1999. unpublished field report to TRAFFIC East Asia *in litt.* to TRAFFIC North America in TRAFFIC East Asia, 2002. *in litt.* to TRAFFIC International, Cambridge, UK.
- Chen T-H., 2002. *in litt.* to IUCN/SSC Wildlife Trade Programme, Cambridge, UK.
- Chen, T-H., Lin, H-C and Chang, H-C., 2000. Current status and utilization of chelonians in Taiwan. In: van Dijk, P.P., Stuart, B.L. and Rhodin, A.G.J. (Eds.), *Asian Turtle Trade: Proceedings of a Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia. Chelonian Research Monographs 2*: 45-51.
- CITES Management Authority of China, 2002. *Identification Manual for Common Turtles and Tortoises*. China Forestry Publishing House. Beijing, China.
- CITES Scientific Authority of Viet Nam, 2002. *in litt.* to TRAFFIC Southeast Asia – Indochina *in litt.* to TRAFFIC International, Cambridge, UK.
- Dao V.T., 1960. Recherches Zoologiques dans la Région de Vinh-Linh. *Zoologische Anzeiger* 164: 221-239.
- Fong, J. 2002. *in litt.* to IUCN/SSC Wildlife Trade Programme, Cambridge, UK.
- Hendrie, D.B., 2000. Status and conservation of tortoises and freshwater turtles in Vietnam. In: van Dijk, P.P., Stuart, B.L. and Rhodin, A.G.J. (Eds.), *Asian Turtle Trade: Proceedings of a Workshop on Conservation and Trade of Freshwater Turtles and Tortoises in Asia. Chelonian Research Monographs 2*: 63-73.
- Hofstra, J., 1995. Kweken met de moerasschildpad, *Mauremys mutica*. *Lacerta* 53 (6): 187-191.
- Iverson, J.B., and McCord W.P., 1994. Variation in East Asian Turtles of the genus *Mauremys* (Bataguridae: Testudines). *Journal of Herpetology*. 28 (2): 178-187.

- Jenkins, M.D., 1995. *Tortoises and freshwater turtles: the trade in southeast Asia*. TRAFFIC International, Cambridge, UK.
- Ma Jianfan, 2002. pers.comm. to TRAFFIC East Asia - China Wildlife Trade Programme, *in litt.* to TRAFFIC International, Cambridge, UK.
- Petzold, H. G., 1963. Über einige Schildkröten aus Nordvietnam im Tierpark Berlin. *Senckenbergiana Biol.*, 44(1): 1-20. Frankfurt am Main.
- Shi, H. and Parham, J.F., 2000. Preliminary observations of a large turtle farm in Hainan Province, People's Republic of China. *Turtle and Tortoise Newsletter* 3:4-6.
- TRAFFIC East Asia, 2002. *in litt.* to TRAFFIC International, Cambridge, UK.
- TRAFFIC Southeast Asia, 2002. *in litt.* to TRAFFIC International, Cambridge, UK.
- van Dijk, P.P., 2002. Socio-economic and cultural aspects of the trade in Asian tortoises and freshwater turtles. Unpublished background paper presented to: Technical Workshop on Trade in Freshwater Turtles and Tortoises in Asia, Kunming, Yunnan Province, China, 25-28 March 2002. Doc. 3.7.
- Yasukawa, Y., Yabe, T., Ota, H., And Iverson, J.B. In press. *Mauremys Mutica* (Cantor, 1842), Asian Yellow Pond Turtle. In: Pritchard, P.C.H. and Rhodin, A.G.J. (Eds.). *Conservation Biology of Freshwater Turtles, Vol. 1. Chelonian Research Monographs*.
- Yasukawa, Y., 2000 *in litt.* to TRAFFIC East Asia - Japan, in TRAFFIC East Asia, 2002. *in litt.* to TRAFFIC International, Cambridge, UK.
- Yasukawa, Y., Ota, H. and Iverson, J.B., 1996. Geographic variation and sexual size dimorphism in *Mauremys mutica* (Cantor, 1842) (Reptilia: Bataguridae), with description of a new subspecies from the southern Ryukyus, Japan. *Zoological Science* 13: 303-317.